Notebook, N-03-00-00.1

1000 tons sand per day of 20 hrs
50 " " hr
Machine will do 2 tons per hr
2.5 Machines required
Screens will do 1 ton per hr
50 banks of screens needed
30 screens high + 4 coarse
1500 screens 1st size
1200 " 2nd "
900 " 3rd "
600 " 4th "
300 " 5th "
2.00 Coarser 1st "
160 " " 2nd "
120 " " 3rd "
80 " " 4th "
40 " " 5th "
5200 Screens in 5 groups

1st Bank 50 screens wide 34 high
2nd " 40 " " 34 "
3rd " 30 " " 34 "
4th " 20 " " 34 "
5th " 10 " " 34 "

$20 per screen for construction

~~$2000 for 32 banks of 64 screens~~

$20 per 1000 for timber work
+ cost of lumber.

Steam Shovel $12,000

Grisley at Shovel 6,000

Tressle + Grisleys $5,000

2 trains of 8 cars.
cars 6 or 700 each

2 locomotives — $6,000 each

$10000 per mile. 60 lb rail
Broad guage

~~12,000~~ $6,000 for Dryer

wet Storage bin $1,000

Belt conveyors, $20 per foot
17 or 18%

1 Steam shovel handling 3,000 tons or 2000 cu yds in 10 hrs. Shovel to work only 1 shift. 10 hrs

Mill to run night and day.

R. R. Cars (Dumping cars) Rails &c Engines, tressles &c. Screens at Shovel.

Dryer, if needed, to work either 10 or 24 hrs. according as material from Shovel is stored before or after drying.

Blowers $150 each 33%
more blowers than needed

$300 for magnetic sep.

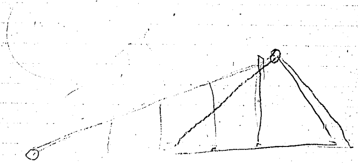
At Edison Portland Cement Co's works conveyor from Rock Crusher to Drier is about 275 ft long 24" belt running 500 ft per min took about 4½ HP running light

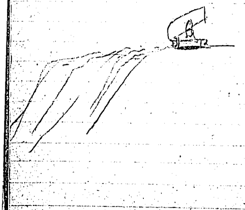
275 ft
4½ HP

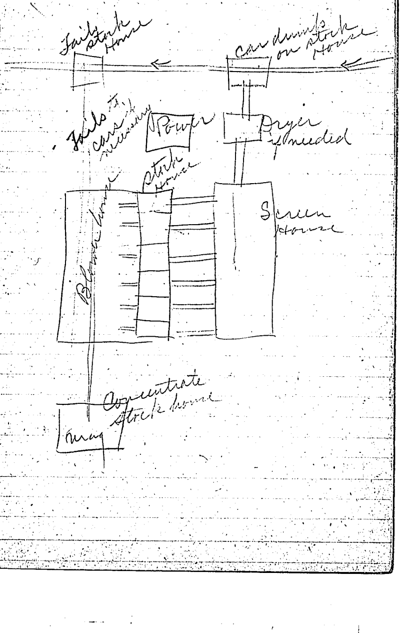
24"
Conveyor
500 ft per min

Screens as per first page delivering into separate ~~stock~~ storage compartment for each size — say 6 sizes 25 Blowers for each 1000 tons, say 2 blowers on largest sizes, 3 for intermediate sizes and 4 perhaps 5 for fines.

Concentrates to be treated magnetically if it contains much iron or reconcentrated, Conveyor to top of screens #20





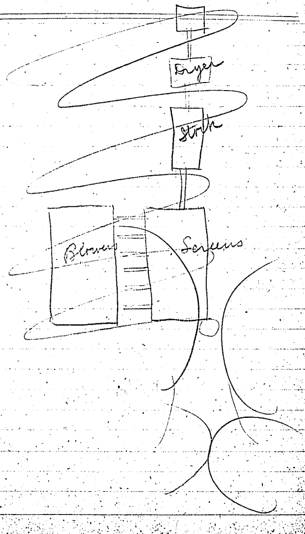

Tails stock House
car dumps on stock House
Tails to cars if necessary
Power
Dryer if needed
Stock House
Blower house
Screen House
Concentrate stock house
mag

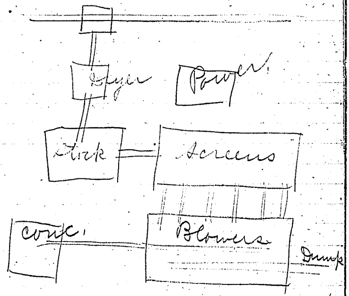
$100 per horsepower for
equipment

2½¢ per K.W. hr.

4½ lbs per Hp hr. for running

2½ HP per 100 ft of Conveyor
plus gravity


Dryer
Stack
Blowers
Screens


Dryer
Power.
Stock
Screens
Conc.
Blowers
Dump

Shovel
Rotary Screen (run by power from shovel)
Cars
Track
Tressle
Dumping house
Conveyor to dryer
Dryer
Conveyor to Stock house
Stock House to hold ½ daily capacity.
Conveyor to Screen house
Screen House
5,200 Screens for each 1000 tons
5 elevators between screen banks
6 Conveyors from screens to bins
6 Conveyors from bins to Blowers
25 Blowers for each 1000 tons
Blower house
Conc. Conveyor under Blowers
Tailings Conveyor " "
Conc. Stock house
Tailings dump.
Power house

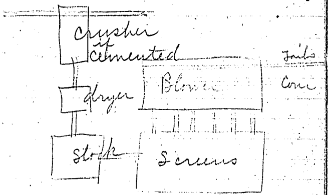
Labor Acct

Steam Shovel 7 men
P [illegible] 4 men
1 Engr
1 Fireman
1 Crane man
4 Pit men
Train Gang
[illegible] 1 [illegible] ([illegible]
Dryer - 2 men
1 conveyor man
Screens - 2 Feedmen
2 Screeners
Blowers 2 conveyorman
4 Blower men
Power 2 Tailing belt.
2 Conc
2 Eng 1 Elec
2 Firemen 1 Asst.
Conc 2 men on mag. sep.

General 1 oil man
5 labor & foreman

Repairs Master Mech.
2 carpenters
Foreman
5 Mach. 3 Helpers
Office (Salary)
Manager - Mill Supt. & Asst
clerk & Book keeper & Boy
1 Cart & man & team

add 10 - $2 men,


Crusher
if cemented
Dryer
Stock
Blower
Screens
Tails
Conc

[illegible]

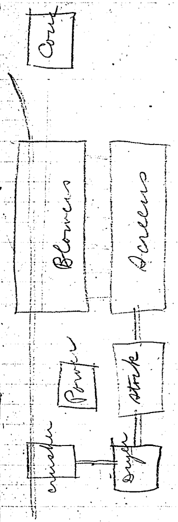
Proposition —

when active (mining [illegible])

[illegible] 10 % plus sinking fund

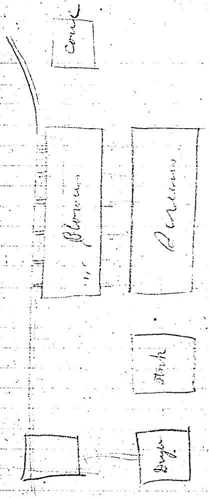
[illegible] selling

[illegible] 32%

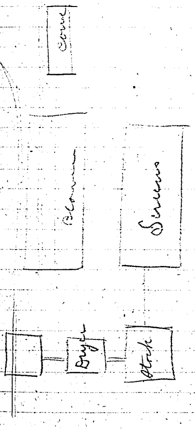

Ore
Blowers
Screens
Power
Strike
Crusher
Dryer

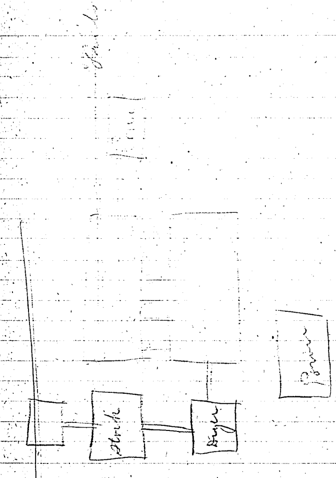
Labor & Expenses

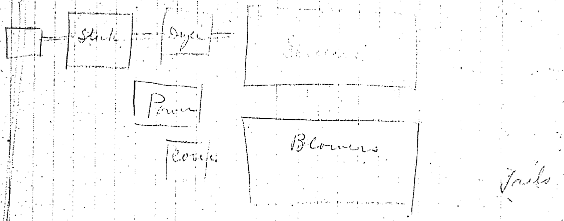
Shovel Gang	Shovel man	3.00
	Engineer	2.50
	Fireman	2.00
	4 Pit men	6.00
Oil		2.00
Coal 4 tons		16.00
Train Gang	2 Eng	5.00
	2 Brakemen	4.00
	2 Firemen	5.00
	Coal & Oil	10.00
	2 Dumpers	3.00
Dryer	2 firemen	4.00
	2 Helpers	4.00
Conveyor to Screens 2 men		4.00
Screens 6 men		12.00
Blowers 8 men		16.00
Power	2 engineers	7.00
	2 Firemen	4.00
	Electrician & Asst.	7.50
Conc. May. Sep 4 men		8.00
		123.50

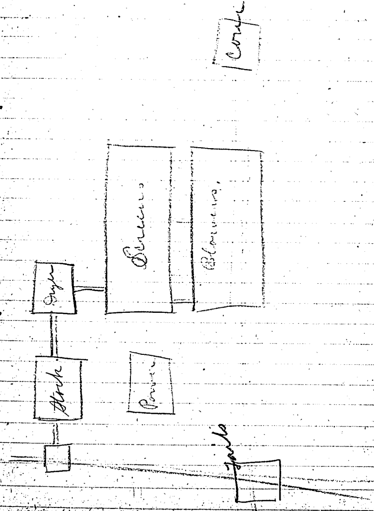


Brought Fwd	123.50
Oil men 2	4.00
5 Labourers + Foremen	10.00
Foreman Mach. Shop	4.00
5 Machinists	15.00
3 helpers	4.50
2 Carpenters	7.00
Master Mechanic	5.00
Man + Team	3.00
Manager	6.00
Mill Supt.	5.50
Book Keeper	3.00
Clerk	2.50
Boy	.75
10 Extra men	20.00
	213.75
Sinking fund	90.00
	313.75
Coal — 8 tons	40.00
Oil	3.00


Conv
Blower
Screens
Boiler
Stack


Stock
Dryer
Power


Stack
Dryer
Screens
Power
Comp
Blowers
Tanks


Stock
Dryer
Screens
Blowers
Power
Tails
Conc.

30
30
900
15
[illegible]

625
25

225
30
6750

14 14

312
150
25
750
300
3750

100
20
2000

20
20
400

25
25
[illegible]

625
16
3750
625
10000

25
25
625
4
2500
2
5000
2
10000
1000
11,000
5,000
16,000

20,000
45
20
900

1st Storage bin – under car dump.
to hold 750 tons, 500 cu yds
or 13500 cu ft say 25 ft cube
using say 20,000 ft at $45 per M
$900 Say $1000

Last Storage bin – over cars
same size as first say $1000

Conveyor to dryer-height 50. ft
" Between 75.
" " [illegible] 30.
" " [illegible] 25.
180 ft

Conveyor [illegible] – say 1100 ft

HP 1100 ft [illegible] at [illegible] HP
[illegible] 27 1/2 HP
60 tons per hr or 2000 lbs per
min 2000 lbs lifted 180 ft =
360000 ft lbs = 11 HP.

Conveyors require say 40 HP.

33 blowers at 1½ HP each
or 50 HP

50 Roller at ¼ HP each
or 12½ HP

Dryer

Conveyor to Dryer

Dryer 50 ft. high 17½%
elevation of Conveyor –
conveyor 290 ft long at $16
per foot = 4,650 say $5,000

50 × 50 = 2,500
4
10,000
4,000
16,000
30,000

10,000
5,000
15,000
45
30
1350

30
40
1400
[illegible]
350
35

2800
28000
15000
28000
15000
88800

89
45
445
356
4005

Dryer

Say $6,000

Conveyor to Screens
Screen house 75 ft high
conveyor 17½° total 430 ft long
at $16 per foot $7,000!

Screen house 90 ft high
50' X 50' say $1,500

Screens 64 high 50 banks
$50 per bank $2,500

Shutes & conveyors to Blowers
say 30 ft high or 170 ft long
six conveyors. or 1020 ft at $16 perft
Say $16,000

33 blowers at $150 = $5,000

Blower house 35 ft high 40 X 350
Say $4,000

Tailings conveyor
350 ft + 145 495 ft
$8,000

Conc conveyor 350 + 100 - 450 ft
$7,200

Conc house $2,500

Conveyors. To dryer - 50 ft high
" to Screens - 75 ft high
" to Blowers 180 " "
305 " "

17½% or 1.800 ft
Tails Conv 500
Conc Conv. 450
2750 ft Conveyors @ $16
= 44 000

28
2½
39

33
3
99

70
20
99

50
310
15500
2000
61)31000000
33~~000~~)516~~000~~
20

250 HP
40
10000

Figures of Mr. Simpkin

Cost of 2,000 yd plant.

Steam Shovel 65 ton Vulcan	8 000
Grizzly conveying	6 000
Locomotives (2)	8 000
½ Mile of Track	5 000
Storage bin 500 tons & Cover 21 M @ $30.	750
Drier	5000
Drier House 30 x 30 x 50 12 M ~~21 M~~	420
Screen house 30 x 75 x 90 43 M.	1500
Screens	4 000
Separator house 20 x 330 x 15 40 M.	1400
Separators 33 @ 150	5 000
Conveyors	44 000
Tailings bin	650
Power Station 200 HP @ $50	10 000
Motor drive 200 HP @ $16	4 000

Labor Account

Shovel –

1 Engineer	5.00
1 Fireman	3.60
1 Craneman	2.60
6 Laborers in pit @ 1.50	9.00

Trains.

2 Engineers	10.00
2 Firemen	7.20
2 Trainmen	5.20

For Experimental plant at Lab.

10 screens each of 5 sizes
.007, .015, .029, .058, .094.

Screen frame or bank, 10 screens

Separator complete 4 ft wide
of Sheet Iron

Cost of Steam Shovels.

Vulcan Little Giant Traction	1¼ yd.	$5,500
" Little Giant Traction Special	"	6,000
" " " Trucks	"	6,000
" " " " "	"	6.260
Bucyrus 35 ton	1½ yd	5,000
45 "	1¾ or 2	6,500
55 "	2 or 2½	7,250
65 "	2½ or 3	8,500
70 "		9,000
75 "	3 or 3½	10,000
85 "	3½ or 4	11,000
95 "	5 yd.	12,000
M. Nitahkum Co.	2 yd	4,500
Apex. Little Giant Traction (sp.)	1¼ yd	3,300
" " Trucks	" "	3,800
Marion Model G	2½ "	6,800
" " A 45 ton	1½ "	38 to 4500
" Improved A		50 to 5500
Thew #0 Single truck	½ yd	3,750
No 1 " "	1 yd	5,200
No 3 " "	1½ "	7,000
No 7 Excavator	1¾ "	6,200
No 6 "	2½ "	8,500
No 5 "	3 or 3½ yd	10,000

Steam Shovels Contd.

Dump Cars.

Apex.	3 yd	36"	D.S.D.	Wood	2nd Hand	$45
	3 "	36"	SSD	"	new	111
	3 "	"	DSD	"	"	121
	4 "	"	SSD	"	"	123
	4 "	"	DSD	"	"	135
Add $10 to last 4 above for standard guage						
	5 yd	4'-8½"	SSD	wood		148
	5 "	"	DSD	"	"	165
	6 "	"	SSD	"		160
	6 "	"	DSD	"		175
Every 5th car with 1 brake full Brakes $9						
"Recking"	24" - 3 yd	oak	DSD			20.
	36" - 3 yd		DSD			35.
Torbert & Peckham	6 yd	4'-8½"	SSD	oak	steel lined bottom	125
Koppel	36"	2 yd	wood			58
	4'-8½	5 yd	wood	roller bearings		182
	"	"	"	SSD		157.50
	"	7 yd				225
	"	5 yd	"	DSD		176.

Locomotives

Apex.	36" guage 600 tons haul on level new	3 200
	standard guage "	3 300
Mitshkum	" " 8 wheel 16x24 (2nd hand)	3 000
	" " 8 " 17x24 "	2 500
Recking	" " 4 drivers & truck 15½x22	1 650
Forbes & Peckham	" " 20x24	5 500
	" " 6 drivers 40 ton 18x24	4 700
	" " " 20x24	6 000
	" " 32 ton 16x24	4 000
Porter	17 ton 10x16	4 300
	34 ton 14x20	6 400

Box #1 1 Parting board frame
5 rear Screens
[illegible] front Screens
2 front & rear Screen frames
60 × [illegible] × 10 = 21.9 cuft 340#

[illegible] 1 Angle plate for fines
1 [illegible]
4 sides Tailings hopper
4 " Cone "
2 fan casing plates
60 × 43 × 6 = 8.95 307#

#3 4 Fan Sides
6 Fan Casing plates
1 Top of [illegible]
2 2" Angles [illegible]
2 2½" " Fan " "
4 short 2" angles
1 Tachometer pulley 2 15/16 bore
1 Roller feed pulley " "
3 short Angles
5 " "
1 Sampler chute
1 Iron pulley 2 15/16 Bore 4" Diam
1 Short Angle.

5.5 × 53.5 × 101 = 17.2
875#

Box #4 8 Fan Blades
2 2 15/16" Collars
2 2 15/16" Bearings
2 Fan Flanges
36 × 51 × 12 = 12.72 506#

Box # 5
1 Feed hopper front
2 " " sides or ends
1 " " angle
1 " " back
1 Sep. side
1 Sep. top
1 Feed Hopper angle
4 pcs angles feet of fan legs
2 Hopper hangings
12 × 37 × 58 393#
14.9

6 Channels and angles
16 pcs.
6 × 22 × 11.5 = 8.65 [illegible]

#7 1 Feed gate Sep.
1 dust screen in frame
5 × 8.5 × 55 65#
1.3.6

8 1 Tachometer
2 grease cups for fan
9 × 13 × 21 65#
1.43

#9 1 Fan Shaft
6 × 7 × 94 = 2.3 217

#10 1 Sep Roller feed with shaft
bearings & grease cups
2 Conc & Tails gates
2 side boards of retarding plate
1 Cover for screen [illegible]
77 × 12 × 10 = 5.35 214#

6.5 × 8.5 × 13½
34#

#11 1 Countershaft for Conc. feed
with collars, pulley bearings
and grease cups.
8 pcs together.
1 pc 1" flat & 1-½" rd. belting

# 12 [illegible] Frames
36x35x19 = 139 236#

# 13 Screen Frames
37x35x19 = 15 241#

# 14 Screen Frames
36x35x19 = 13.9 227#

[illegible] 1 [illegible] pulley
1 [illegible] "
1 wooden pulley for feed drum
6x28x28 = 2.73 83#

#16 1 set batteries
1 magnet, wire, cord, pulley
& key
32x20x20 7.4 192#

#17 1 Screen Roller with shaft
bearings, grease, cups.
2 slides of tailings gate
2 " " Cone "
3 U pins
8 bags bolts
1 bundle stay pcs of sep. sides
1 Screen Hook
12.5 X 14.5 X 80 = 8.4 380

# 18. 2 pcs Reconcentrator
1 pc sep bottom
2 " sep sides
1 " " "
12.5 X 34.5 X 59 = 14.8 311

# 19 Screens on frames
Screen frames
31.5 X 24 X 19 = 8.35 126#

# 20 CMC Personal
15X26.5X22 = 5.1 91#

#21 1 half of Screen chute
91 X 55 X 15.5 = 14.5 430#

#22 1 half of Screen Chute
16 X 100.5 X 55.5 = 51.5 434#
1 glass door for Sep.
10 gross 3/4 X 12 screws
1 pkg 4" screws
2 pkgs 1/4 X 1/2 ft. Hd
1 bag 1 1/2 X 8 Screws for Screens.
1 pkg 1/2" belt couplings
3 S wrenches
2 monkey wrenches
1 bicycle wrench
10 gross 1 1/2 X 8 screws
1 Can grease
1 - 1" belt for roller feed.
part of 600 - screen angle plates.
1 lot bags.
1 countersink punch + die
10.5 X 19 X 29.5 = 3.41 281#

#② H G K
40 X 37 X 25 = 21.4 200#

#① H G K
54 X 35 X 26 = 28.5 223#

#③ H.G.K.
40 X 24 X 20 = 11.1 78#

On Wagon July 14

1st load		2nd load
H.G.K	# ①	#18 CMC
H.G.K	# ②	3
H.G.K	# ③	22
CMC	# 15	21
"	# 16	17
"	# 8	6
"	# 11	
"	# 7	
"	# 9	
"	# 4	
"	# 1	
"	# 10	
"	# 2	
"	# 5	

10½ X 18 X 55

Box #24

1 roll wire cloth
1 roll drawings
~~lot cartridges~~
2 screen sides

4 pcs sheet iron for [illegible]
2 boards for screen frame
1 lots large + small bags
1 lot (50) .037 screens
1 box escutchion pins
1 lot cleats for screen frame joints
1 lot screen angle plates
1 nail puller
60 pcs wood for hand screens
1 muzzle

#25 S. Salmond personal
15.5 X 29 X 34 = 8.85 165#

#26			
	1	lot	.150 ✓
	1	"	.118 ✓
	1	"	.094 ✓
	1	"	.074 ✓
	1	"	.059 ✓
	1	"	.047 ✓
	1	" ⑤	.007 ✓
	1	" ⑤	.029 ✓

9.5 X 13 X 17.5 = 1.25 125#

Total weight CMC cases not including #24 7028#
Total volume same 295.35 cu ft.

Total weight HGK cases 501#
Total volume same 61 cuft

Box #27 — Screen fram angle plates out of box #24
1 lot ore bags.

Box #24 Assay odds & ends,
1 lot bags
2 lots cupels

Box #28 - Scorifiers
Muffle

#29 - Rotary Drier 1 ball twine
1 lot bags Towels & soap.
1 box for Little Giant Crusher
Canvas front for screens.

#30 4 tubs
3 gold dishes
1 lot Bags

Order

~~Adz & Handle~~ ~~Rennett~~
~~Brace~~
~~Bits~~
~~Saw~~
~~Plane~~
~~Hammer~~
~~Square~~
~~Level~~
~~6 small plates~~

~~10 lbs Test lead~~
~~1 " pure sheet lead~~
~~2 " borax glass lumps~~
~~1 gross 2" Scorifiers~~
~~1 gross 20 gram~~ cupels
½ ~~oz pure silver foil on thin~~ plate
~~2 lbs C. P. Nitric Acid~~
1 ~~small pair tweezers for weights~~

✓ Oven
✓ 2 Mattresses
✓ 3 Springs
Blankets
Pots & Kettles.
✓ 2 Wicker Chair.
✓ Tea pot
✓ 3 pillows
✓ Porridge Pot
✓ 1 boiler
✓ 1 egg poacher
✓ 1 tea strainer
✓ 1 ladle
✓ 1 grater.
✓ 4 Towels
✓ 1 Iron Kettle
✓ 2 buckets
✓ 1 Dish pan
✓ 1 frying pan
✓ 1 bake pan
✓ 3 pie dishes
✓ 1 wash basin
✓ 1 water jug
1 bread dish
Meat Platter
Carving knives

2 bags chaff
2 bu Corn
✓ Lamp
Oil

12" Fairbanks pulley
Bx screens
~~4 gr. [illegible]~~
Bottle box
~~albany grease #3~~
~~[illegible]~~
Hand screen boxes
2 - 1 15/16" Collars
~~4 Gross 3/4" X 12 Screws ft. H.W~~
1 Can P+B paint
Paint brushes
200 mesh wire cloth.

14×17×23   32-6

John Lomax